

REMARKS

By this amendment, Applicants have amended the claims to more clearly define their invention. In particular, claim 1 has been amended to delete the reference numerals therefrom and to change “mineral” to read --mineral fillers-- to provide antecedent basis for the term “mineral fillers” in claim 2. Claims 2-7 have been amended to improve their format, including amending claims 3, 4 and 6 to eliminate the indefiniteness problems noted by the Examiner. Claims 8 and 9 have been revised to more clearly directed to a tank for a motor vehicle and a fuel line for a motor vehicle, respectively. Applicants have also added claims 10-13 to define further aspects of the present invention. Claims 10, 11 and 13 recite certain features deleted from claims 3, 4 and 6, respectively. Claim 12 is supported by, e.g., the description at, e.g., page 5, lines 2-5 of Applicants' specification.

In response to the provisional obviousness-type double patenting rejection in numbered sections 1 and 2 on pages 2-3 of the Office Action, Applicants are submitting herewith a timely filed and properly executed Terminal Disclaimer in compliance with 37 CFR 1.321. In view of the filing of the Terminal Disclaimer, reconsideration and withdrawal of the provisional obviousness-type double patenting rejection are requested.

The Terminal Disclaimer has been filed in order to advance the prosecution of the application and is not an admission of the propriety of the provisional obviousness-type double patenting rejection.

In view of the foregoing amendments to claims 3, 4 and 6, the rejection of these claims under 35 U.S.C. 112, second paragraph, in numbered sections 1-4 on pages 3 and 4 of the Office Action are requested.

In view of the foregoing amendments to claims 8 and 9, reconsideration and withdrawal of the rejection of these claims under 35 U.S.C. 112, second paragraph, and 35 U.S.C. 101 in numbered sections 5-7 of the Office Action are requested.

Claims 1, 3, 4-6 and 6-9 stand rejected under 35 U.S.C. 102(b) as being anticipated by European patent application publication number EP 1108598 A2 to Ellis. Claim 5 stands rejected under 35 U.S.C. 103(a) as being unpatentable over EP '598 to Ellis. Applicants traverse this rejection and request reconsideration thereof.

The present invention relates to a controlled hydrocarbon permeability multilayer structure and to a tank for a motor vehicle and a fuel line for a motor vehicle including such a structure. According to the present invention, the structure includes at least one inner polymer layer and at least one outer polymer layer comprising a mixture of polymer material and of fillers. The fillers are mineral fillers and selected to adsorb and to trap an amount of hydrocarbons discharged through the inner layer so as to reduce the permeability of the structure.

EP '598 to Ellis discloses a permeation barrier fuel tank for a vehicle that includes a shell 12 having a wall formed from a plurality of layers. The layers include at least an inner layer 30, an outer layer 34 and a fuel permeation barrier layer 32 disposed between the inner layer 30 and the outer layer 34 and being made of a nanocomposite polymer. The nanocomposite polymer is a polymer material in which a small quantity of a "platy filler material" has been uniformly dispersed. See, paragraph 0014 of EP '598. As disclosed in paragraph 0016 of EP '598, the "platy filler material" presents an efficient obstacle to the transport, i.e., diffusion, of

penetrant molecules, such as those normally found in fuels. On the other hand, the mineral filler in the outer layer of the structure of the present invention is selected to adsorb and to trap an amount of hydrocarbons discharged through the inner layer. EP '598 does not disclose that the platy filler material is a mineral filler nor does it disclose that the platy filler material is selected to adsorb and to trap an amount of hydrocarbons. Rather than disclosing that the platy filler material adsorbs and traps hydrocarbons, EP '598 discloses that the platy filler material presents an efficient obstacle to the transport of molecules found in fuel. EP '598 does not disclose and would not have rendered obvious the presently claimed invention.

Claim 2 stands rejected under 35 U.S.C. 103(a) as being unpatentable over EP '598 in view of U.S. 6,117,328 to Sikdar et al. Applicants traverse this rejection and request reconsideration thereof. The deficiencies of EP '598 are noted above.

The Sikdar et al. patent discloses a pervaporation membrane used for removing volatile organic compounds from wastewaters. As noted at column 1, lines 18-23 of Sikdar et al., pervaporation is a method for removing, concentrating and recovering substances from a liquid by sorbing in a pervaporation membrane the component to be removed, followed by diffusion and evaporation of the component or components to the other side of the membrane followed by condensation. The pervaporation membrane in Sikdar et al. is prepared by dispersing at least one hydrophobic adsorbent such as activated carbon uniformly into a polymer matrix.

Since the object of EP '598 is to provide a permeation barrier layer, while the object of pervaporation is to diffuse a component or components to the other side of the membrane, there would have been absolutely no reason to modify the teachings of EP '598 with those of Sikdar et al. Thus, there would of have been no reason to

use activated carbon or zeolite, the absorbing component in Sikdar et al., in the permeation barrier fuel tank of EP '598.

For the foregoing reasons, claim 2 is patentable over the proposed combination of references.

Applicants note the Examiner has cited a number of documents as being pertinent to applicants' disclosure. However, since none of these documents has been applied in rejecting the claims formerly in the application, further discussion of these documents is deemed unnecessary.

In view of the foregoing amendments and remarks and the attached Terminal Disclaimer, favorable reconsideration and allowance of all the claims now in the application are requested.

Please charge any shortages in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (612.44509X00) and please credit any excess fees to such deposit account.

Respectfully submitted,

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Attachment Terminal Disclaimer
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